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ABSTRACT

The purpose of this study was to investigate the academic performance of the following groups of fulltime undergraduate students on academic probation during the fall semester, 1970-71, at Northern Illinois University (NIU): (1) those students not employed; (2) students employed on-campus; and (3) students employed off-campus. Based on other research on this topic the hypothesis was that there would be no significant difference in academic performance among the groups. A questionnaire was sent to 247 students on probation asking them about their employment in terms of location and weekly hours worked. Two hundred and thirty-eight responded, of whom 161 were not employed, 33 were employed on-campus, and 44 were employed off-campus. A one-way analysis of variance was applied utilizing Duncan's New Multiple Range Test. The cumulative GPA prior to the fall semester was compared to the 1970-71 fall semester GPA, and the differences between these for each of the three groups were noted. No demonstrable differences in GPA's among the three groups were found when the students worked 20 hours or less a week. This, however, was not true for those who worked more than 20 hours. They received a significantly lower GPA. (AF)

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AN ANALYSIS OF ACADEMIC PERFORMANCE OF WORKING AND NON-WORKING STUDENTS ON ACADEMIC PROBATION AT NORTHERN ILLINOIS UNIVERSITY

Jerry D. Augsburger

University of Missouri-Columbia

The relationship or effect, if any, of part-time employment to the academic performance of full-time, undergraduate students who are on academic probation at Northern Illinois University (NIU) is currently of considerable importance to the Committee on Student Employment and the Office of Student Financial Aids at that institution.

The Committee on Student Employment is composed of administrators, faculty, and students, and is directly responsible for establishing policy and regulations pertaining to on-campus employment for students. The Office of Student Financial Aids is responsible for implementation of policy and administering the on-campus student employment program.

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Students on academic probation at NIU were prohibited from working on-campus prior to fall semester, 1969-70, under the assumption that working would further jeopardize their academic performance. At that time, the Committee on Student Employment revised the student employment regulations so that students on academic probation would be allowed to

work not to exceed 20 hours per week providing approval was first secured by the student from the Office of Student Financial Aids. The only procedure through which a student may secure a recommendation of approval for on-campus employment is to complete a personal information sheet, and be interviewed and counseled by a staff person in the Office of Student Financial Aids.

No information has been available in the past in regard to the extent and effect of off-campus student employment. Off-campus employment for students is in no way governed or controlled by the university or its agents. However, the Office of Student Financial Aids does attempt to maintain a working relationship with off-campus employers and potential employers as well as students seeking off-campus employment. This service is normally rather minimal due to the fact that the number of students seeking off-campus employment usually greatly exceeds the number of off-campus positions available. Consequently, numerous off-campus employers from past experience expect to fill available positions from among the many student applicants who will ba actively seeking out the available jobs. As a result, many employers do not feel the need to contact the Office of Student Financial Aids for additional applicants.

The revised employment regulations pertaining to students on academic probation have been in effect for approximately three semesters. Thirty-six students on

academic probation were approved for on-campus employment during fall semester, 1970-71.

The purpose of this study was to investigate the academic performance of the following groups of full-time, undergraduate students on academic probation during fall semester, 1970-71, at Northern Illinois University: (1) those students not employed on-campus or off-campus; (2) those students employed on-campus; and, (3) those students employed off-campus.

Several articles and studies have been published which deal with the general topic of the relationship of part-time employment to the academic performance of full-time students. However, none of the studies dealt with the specific problem area of the relationship of part-time employment to the academic performance of full-time, undergraduate students who are on academic probation.

Trueblood (1957) found that working while enrolled as a full-time student did not adversely affect academic performance of students at Indiana University. Trueblood concluded that part-time employment did not have a significant positive or negative effect upon academic performance, and that it was not possible to establish a relationship between maximum number of hours worked per week and the maintenance of a given grade point average.

Hay (1969) examined student work patterns and the relationship to academic performance of students at

Pennsylvania State University-Ogontz Campus. Findings indicated that the academic performance of students who worked fifteen hours per week or less was not adversely affected; however, grades tended to suffer if the job involved sixteen or more hours per week. It was found that academic performance was higher if the student's job was relevant to his major field of study.

Henry (1967) studied the academic performance of working and non-working freshmen at the University of Missouri-Columbia. He found no significant differences between the mean grade point averages of the workers and non-workers at any ability level. He concluded that freshmen who need financial assistance may be employed part-time up to fifteen hours per week without sacrificing academic achievement.

Budd (1956) in an earlier study of freshmen at Western Washington College reached similar conclusions. No significant relationship between employment and academic adjustment of the entering freshmen was found. In general, he states, employment outside of college class hours should not be an academic handicap.

MacGregor (1966) investigated the part-time work habits of Brooklyn College undergraduates. Approximately twenty-five percent of the working students felt that part-time employment had lowered their academic grade point average or otherwise interfered with their learning. This infers

that seventy-five percent of the working students felt that employment had not adversely affected their academic performance. Also revealed was the fact that fifty percent of the students who did not work as undergraduates made this choice because they believed that part-time employment would interfere with their academic or co-curricular work.

Baker (1941) found in a study at Friends University that academic performance of students was not adversely affected if employment did not exceed twenty-seven hours per week. For those students working more than twenty-seven hours per week on the average, academic performance tended to suffer accordingly.

The research question to be answered in this study is: Is there a significant difference in the fall semester academic performance of the following groups of full-time, undergraduate students on academic probation during fall semester, 1970-71, at Northern Illinois University: (1) those students not employed on-campus or off-campus; (2) those students employed on-campus; and, (3) those students employed off-campus? The null hypothesis was tested: There is no significant difference in the academic performance as indicated by fall semester grade point average achieved by students in Groups 1, 2, and 3, for fall semester, 1970-71.

METHOD

Selection of Participants

The undergraduate academic probation list compiled by the university at the conclusion of spring semester, 1969-70, provided a starting point for selection of students eligible to participate in this study. As shown by data in Table 1, this list included 760 students, however, for various reasons indicated, 513 students were considered ineligible leaving a total of 247 students meeting the eligibility criteria for this project. In addition to being on academic probation, all of the eligible students had been on campus at least one semester and had attempted ten or more semester hours of course work during fall semester, 1970-71.

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Insert Table 1 about here

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Instrument

A brief questionnaire (See Appendix A) was formulated for the purpose of answering three basic questions: Was the student employed during fall semester, 1970-71?; If employed, where was the location of employment?; and, If employed, how many hours per week on the average did the student work? All other basic information utilized in the study was verified from university records.

Collection of Data

The questionnaire with a cover letter (See Appendix B) was mailed to all of the 247 eligible students, and at intervals of approximately three weeks, two follow-up questionnaires with appropriate cover letters (See Appendices C and D) were sent followed by an attempted telephone contact. This procedure produced contact with 238 students representing 96.4 percent of the total eligible students. The 238 participating students were represented by group as follows: 161 students not employed on-campus or off-campus; 33 students employed part-time on-campus; and 44 students employed part-time off-campus.

Variables

Academic probation is not a variable since all students included in this study are on academic probation.

a. Treatment Group 1: Students are not employed on-campus or off-campus.

b. Treatment Group 2: Students are employed part-time on-campus.

c. Treatment Group 3: Students are employed part-time off-campus.

d. Dependent variable in Groups 1, 2, and 3: Academic performance as indicated by grade point average of students for fall semester, 1970-71.

Statistical Technique Used

A one-way analysis of variance was applied utilizing Duncan's New Multiple Range Test. The following analyses were made:

a. Comparison of cumulative grade point average of students in Groups 1, 2, and 3, prior to fall semester, 1970-71.

b. Comparison of semester grade point average of students in Groups 1, 2, and 3, for fall semester, 1970-71.

c. Comparison of differences between cumulative grade point average and fall semester grade point average of students in Groups 1, 2, and 3.

DATA ANALYSIS AND FINDINGS

Grade point averages used in this study have been computed on the basis of a 4.0 system.

The first operation to be accomplished was to determine if the cumulative grade point averages of students in Groups 1, 2, and 3, differed significantly prior to fall semester, 1970-71. As indicated by data in Table 2, a one-way analysis of variance was applied and the null hypothesis of no difference between groups on the basis of cumulative grade point averages prior to fall semester was accepted.

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Insert Table 2 about here

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The next step was to apply a one-way analysis of variance to the semester grade point averages of students in Groups 1, 2, and 3, for fall semester, 1970-71. As indicated by data in Table 3, the null hypothesis was accepted that there was no significant difference in the academic performance as indicated by semester grade point average achieved by students in Groups 1, 2, and 3, for fall semester, 1970-71.

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Insert Table 3 about here

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As a further check on the academic performance of students in the three groups for fall semester, 1970-71, a one-way analysis of variance was applied to the difference between cumulative grade point average and semester grade point average of students in the three groups. Again the null hypothesis was accepted that there was no significant difference in the academic performance as shown by differences in grade point average achieved by students in Groups 1, 2, and 3 (See Table 4).

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Insert Table 4 about here

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At this point in the analysis of data, it appeared that there was no significant difference between the three groups of students on the measures of cumulative grade point

average, fall semester grade point average, or difference between the two grade point averages. On the basis of these findings, it may well be conjectured that students who were on academic probation and who were employed, whether on-campus or off-campus, performed no differently on the basis of fall semester grades than those students who were not employed. However, a further examination of the academic performance of employed students separated into categories based on average hours worked per week indicated that further investigation in this area might prove fruitful. A visual inspection of Table 5 indicated that cumulative grade point averages of all categories of working and non-working students differed very little. Further, it appeared that those students working on-campus and off-campus on the average of 20 hours or less per week were somewhat similar in their fall semester academic performance while those students employed more than 20 hours per week off-campus appeared to differ considerably. Also, it appeared that the non-working student group differed considerably in its fall semester grade point average from the group working over 20 hours per week while differing to a smaller degree in relation to the combined group of students working 20 hours or less per week.

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Insert Table 5 about here

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In order that a meaningful comparison might be accomplished, a fourth group of students was formed including only those students who were employed off-campus for more than 20 hours per week on the average. A one-way analysis of variance was applied to the fall semester grade point average of the four groups of students--students who were not employed; students employed on-campus 20 hours or less per week on the average; students employed off-campus 20 hours or less per week on the average; and students employed off-campus more than 20 hours per week on the average. As indicated by data in Table 6, the null hypothesis of no difference in the fall semester academic performance between the four groups of students was rejected. Duncan's New Multiple Range Test indicated that the fall semester academic performance of the group of students employed off-campus more than 20 hours per week differed significantly from the other three student groups. As can be seen in Table 6, those students employed more than 20 hours per week on the average, performed significantly poorer academically during fall semester, 1970-71, than the other three student groups.

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Insert Table 6 about here

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At this point, a further analysis seemed to be in order involving the fall semester adademic performance of those

students employed 20 hours or less per week on-campus and off-campus combined in one group, compared to the group of students not employed. A one-way analysis of variance was applied and the null hypothesis of no difference between the two groups of students on the basis of fall semester academic performance was rejected. As indicated by data in Table 7, those students employed 20 hours or less per week, on-campus and off-campus combined, performed significantly higher than those students who were not employed on the basis of fall semester grade point average.

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Insert Table 7 about here

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DISCUSSION

In answer to the originally stated research question, it can be stated that there was apparently no significant difference between those students not employed, those students employed on-campus, and those students employed off-campus, on the basis of their cumulative grade point averages prior to fall semester, their fall semester grade point averages, and the difference between the two. The two groups of working students, on-campus and off-campus, achieved a slightly higher fall semester grade point average than the non-working students, however, these differences were not significant. These findings tend to support those

of Trueblood (1957) in his work at Indiana University.

In pursuing a new direction for additional study, those students employed more than 20 hours per week off-campus were placed in a separate group for further analysis. It was found that this group of students achieved a significantly lower fall semester grade point average than the other three groups of students. Thus, it appears that a student's grades may tend to suffer if he attempts to work more than 20 hours per week regularly. This conclusion tends to support the findings of Hay (1969), Henry (1967), and Baker (1941).

An additional analysis was accomplished by combining all students who worked 20 hours or less per week, on-campus and off-campus, in one group and comparing the fall semester grade point averages to those of the non-working student group. It was found that those students who worked 20 hours or less, whether on-campus or off-campus, achieved significantly higher fall semester grades than those students who were not employed. This finding would suggest that those students on academic probation may tend to improve their academic performance significantly by choosing to work up to 20 hours per week. This is apparently a new finding not previously reported or supported in the literature.

The implications of the findings discussed above are rather brief but meaningful. Students on academic probation

should not be discouraged from seeking part-time employment. Rather, they should be encouraged and given assistance in seeking part-time employment. However, students on academic probation should be discouraged from working more than 20 hours per week off-campus, and not allowed to work more than 20 hours per week on-campus. To permit or allow this to happen is to enable the student to commit academic suicide in most cases.

There appears to be very little difference in the fall semester academic performance of those probationary students working 20 hours or less per week whether on-campus or off-campus. Consequently, there appears to be no basis in fact for requiring the probationary student seeking part-time, on-campus employment to first procure approval from the Office of Student Financial Aids before being allowed to work. Possibly, removing potential roadblocks such as this might encourage more students on academic probation to seek employment.

There are several limitations to this study which should be examined. The number of students who were employed on-campus and off-campus was rather small, however, all potentially eligible students who met the specific criteria of the study were included.

Only students on academic probation were utilized in this study. The project might possibly have been more meaningful if matching groups of non-probationary students

had been included.

No attempt was made to include such factors as motivation, personality, reason for working, family background, and other possibly pertinent factors. Findings from this study would undoubtedly have been enhanced had factors such as these been taken into consideration and included in the analysis of data.

In conclusion, it appears that further study in the area of student employment and academic achievement in as comprehensive a fashion as possible would be an appropriate and meaningful topic to pursue in greater depth.

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TABLE 1

SUMMARY DATA OF STUDENTS INCLUDED ON
SPRING SEMESTER (1969-70) PROBATION LIST

	Sub-totals	Totals
Spring Semester (1969-70) Probation List.....		760
Students Not Eligible For Inclusion In Study		
A. Did Not Enroll Fall Semester 1970-71...	284	
B. Temporary Probation (i.e.: student had incomplete course, not low GPA).....	98	
C. Attempted Less Than 10 Semester Hours..	84	
D. Removed Probationary Status During Summer Session.....	29	
E. Withdrew From NIU During Fall Semester.	18	
Total Students Not Eligible For Study.....		513
Students Eligible For Inclusion In Study.....		247
Eligible Students Not Contacted		
A. Questionnaire Returned--Address Unknown.....	4	
B. Did Not Respond to Questionnaire or Telephone Contact.....	5	
Total Eligible Students Not Contacted.....		9
Total Students Included In Study.....		238

TABLE 2

SUMMARY DATA AND ANALYSIS OF VARIANCE ON NIU ACADEMIC PROBATIONARY STUDENTS' CUMULATIVE GRADE POINT AVERAGES PRIOR TO FALL SEMESTER, 1970-71

	Groups of Probationary Students		
	Not Employed	Employed On-Campus	Employed Off-Campus
Number of Students	161	33	44
Mean	1.768	1.836	1.785
Standard Deviation	0.210	0.173	0.171

Source	df	s.s.	m.s.	F
Between Groups	2	0.129	0.065	1.636 n.s.
Within Groups	235	9.280	0.040	
Total	237	9.409		

TABLE 3

SUMMARY DATA AND ANALYSIS OF VARIANCE ON NIU ACADEMIC PROBATIONARY STUDENTS' FALL SEMESTER GRADE POINT AVERAGES

	Groups of Probationary Students		
	Not Employed	Employed On-Campus	Employed Off-Campus
Number of Students	161	33	44
Mean	2.199	2.330	2.254
Standard Deviation	0.600	0.458	0.687

Source	df	s.s.	m.s.	F
Between Groups	2	0.506	0.253	0.704 n.s.
Within Groups	235	84.540	0.360	
Total	237	85.046		

TABLE 4

SUMMARY DATA AND ANALYSIS OF VARIANCE ON NIU ACADEMIC PROBATIONARY STUDENTS' FALL SEMESTER GPA MINUS CUMULATIVE GPA

	Groups of Probationary Students		
	Not Employed	Employed On-Campus	Employed Off-Campus
Number of Students	161	33	44
Mean	0.430	0.493	0.470
Standard Deviation	0.595	0.467	0.641

Source	df	s.s.	m.s.	F
Between Groups	2	0.141	0.071	0.204 n.s.
Within Groups	235	81.342	0.346	
Total	237	81.483		

TABLE 5

SUMMARY DATA OF STUDENTS GROUPED ACCORDING TO LOCATION OF WORK AND NUMBER OF HOURS WORKED PER WEEK INCLUDING NON-WORKING STUDENTS

Group	No.	Cum. GPA	Sem. GPA
Non-Working	161	1.768	2.199
Working On-Campus	33	1.836	2.330
Working Off-Campus (20 hours or less)	32	1.815	2.447
Working Off-Campus (More than 20 hrs.)	12	1.706	1.737
Working On-Campus and Off-Campus (20 hours or less per week)	65	1.826	2.388

TABLE 6

SUMMARY DATA AND ANALYSIS OF VARIANCE ON NIU ACADEMIC PROBATIONARY STUDENTS' FALL SEMESTER GRADE POINT AVERAGES

	Groups of Probationary Students			
	Not Employed	Employed On-Campus (20 hours or less)	Employed Off-Campus (20 hours or less)	Employed Off-Campus (More than 20 hours)
No. of Students	161	33	32	12
Mean	2.199	2.330	2.448	1.737
Stand. Dev.	0.560	0.458	0.570	0.728

Source	df	s.s.	m.s.	F
Between Groups	3	4.917	1.639	4.786*
Within Groups	234	80.130	0.342	
Total	237	85.047		

*Significant at .01 level

TABLE 7

SUMMARY DATA AND ANALYSIS OF VARIANCE ON NIU ACADEMIC PROBATIONARY STUDENTS' FALL SEMESTER GRADE POINT AVERAGES

	Groups of Probationary Students	
	Not Employed	Employed On-Campus and Off-Campus (20 hours or less)
Number of Students	161	65
Mean	2.199	2.388
Standard Deviation	0.560	0.516

Source	df	s.s.	m.s.	F
Between Groups	1	1.652	1.652	4.964*
Within Groups	224	74.533	0.333	
Total	225	76.185		

*Significant at .05 level

APPENDIX A

Augsburger

QUESTIONNAIRE

Instructions: If a specific question or item does not apply to you, enter DNA in the appropriate blank. Please complete this questionnaire promptly and return it to NIU in the stamped, addressed envelope provided. Thank you.

Name_____

Address_____

Age_____Date of Birth_____Sex_____

Married: Yes_____No_____Divorced or Separated_____

Number and ages of children, if applicable_____

Fall Semester credit hours: Attempted_____Earned_____GPA____

Were you gainfully employed, assisting with family related business or farm, or involved with volunteer work of any kind during Fall Semester, 1970-71? Yes_____No_____

IF YOUR ANSWER TO THE ABOVE QUESTION WAS NO, YOU HAVE COMPLETED THIS QUESTIONNAIRE SINCE THE ITEMS BELOW DO NOT APPLY TO YOU. PLEASE RETURN THIS QUESTIONNAIRE TO NIU PROMPTLY.

If answer to above question was yes, please designate type and description of work_____

Average per week: Hours worked_____Earnings_____

Name of employer or organization_____

Location of employment or work (city)_____

Date employment started_____

Date employment ended, if applicable_____

Do you feel that working affected your academic performance in any way? Yes_____No_____If answer is Yes, please explain:

APPENDIX B

Augsburger

OFFICE OF STUDENT FINANCIAL AIDS
NORTHERN ILLINOIS UNIVERSITY
DEKALB, ILLINOIS

February 15, 1971

Dear Student,

In an effort to better serve student needs, I am conducting a study investigating the academic performance of working and non-working undergraduate students attending Northern Illinois University

Your assistance in completing this important project is urgently needed. The results of this study will assist greatly in counseling the working student and the student seeking employment in addition to the financially needy student who has not previously considered employment.

Please complete the enclosed questionnaire and return it to this office in the stamped, addressed envelope at your earliest convenience.

Thank you very much for your cooperation and assistance in helping to complete this important project for the ultimate benefit of NIU students.

Sincerely,

Jerry D. Augsburger
Assistant Coordinator
Student Financial Aids

Encl.

APPENDIX C

Augsburger

OFFICE OF STUDENT FINANCIAL AIDS
NORTHERN ILLINOIS UNIVERSITY
DEKALB, ILLINOIS

March 2, 1971

Dear Student,

Approximately two weeks ago, I sent a questionnaire to you and a number of other NIU students. Your completed questionnaire, which has not yet been received, is urgently needed for the purpose of completing a study investigating the academic performance for Fall Semester 1970-71, of working and non-working NIU students.

Your participation and assistance is crucial to the successful completion of this important project. As was previously stated, the results of this study will assist greatly in counseling the working student and the student seeking employment in addition to the financially needy student who has not previously considered employment.

For your convenience, another questionnaire has been enclosed. Please complete the quest' nnaire and return it to this office in the stamped, addr sed envelope at your earliest convenience. Do not underestimate the importance of your individual response to the satisfactory completion of this project.

Thank you very much for your cooperation. Your assistance in this research study is greatly appreciated.

Sincerely,

Jerry D. Augsburger
Assistant Coordinator
Student Financial Aids

Encl.

Augsburger

APPENDIX D

OFFICE OF STUDENT FINANCIAL AIDS
NORTHERN ILLINOIS UNIVERSITY
DEKALB, ILLINOIS

March 20, 1971

Dear Student,

Over the past several weeks, I have twice contacted you in regard to completing a very brief questionnaire. Your completed questionnaire, which has not yet been received, is urgently needed for the purpose of completing a very important and relevant research study.

I realize that there are seemingly never-ending demands on a person's available time. However, it would be greatly appreciated if you would complete the enclosed questionnaire. Your participation and assistance is crucial to the successful completion of this important project.

For your convenience, another questionnaire has been enclosed. Please complete the questionnaire and return it to this office in the stamped, addressed envelope at your earliest convenience.

Thank you very much for your cooperation. Your assistance in this research study is greatly appreciated.

Sincerely,

Jerry D. Augsburger
Assistant Coordinator
Student Financial Aids

Encl.